AUTHOR INDEX

BANG, GARY M., Prototype photomasks—a low-cost alternative, 180
COATES, VINCENT J., Computerized optical systems for linewidth and film-thickness measurements on microelectronic circuits, 184
COLEMAN, HARRY L., Use of 436 nm optical step-and-repeat imaging for wafer fabrication, 15
DUBROEUCQ, GEORGES MICHEL, Coherent illumination improves step-and-repeat printing on wafers, 28
ELLIOTT, DAVID J., Positive photoresists as ion implantation masks, 153
GUIDICI, DAVID C., Wafer flatness: an overview of measurement considerations and equipment correlation, 132
HERSHEL, RONALD S., Autoalignment in step-and-repeat wafer printing, 54
JASKAR, P. R., Mask fabrication with vector scan electron beam system, 90
JOHNSON, DONALD W., How photoresists relate to the world of 1984, 108
KANO, ICHIRO, Evaluation methods in the design stage of projection lenses, 48
KING, MICHAEL C., New generation of 1:1 optical projection mask aligners, 70
KLEINKNECHT, HANS P., Diffraction gratings as keys for automatic alignment in proximity and projection printing, 63
KRAFT, A. J., Mask fabrication with vector scan electron beam system, 90
LACOMBAT, MICHEL, Coherent illumination improves step-and-repeat printing on wafers, 28
LANAHAN, MIKE, Use of 436 nm optical step-and-repeat imaging for wafer fabrication, 15
LIN, B. J., Portable conformable mask—a hybrid near-ultraviolet and deep-ultraviolet patterning technique, 114
MacDONALD, D. B., E-beam lithography field abutment characterization using a surface acoustic wave (SAW) spatial converter, 98
MURASKI, EDWARD S., New generation of 1:1 optical projection mask aligners, 70
NAKAZAWA, K., Optical measuring technology of the micropatterns, 124
NEUREUTHER, A. R., Influence of partial coherence on projection printing, 22
O'TOOLE, M. M., Influence of partial coherence on projection printing, 22
OVERALL, EDSELL, Dry etching with ion beam milling, 140
PATLACH, A. M., Mask fabrication with vector scan electron beam system, 90
SCHNEIDER, WILLIAM C., Testing the Mann Type 4800DSW™ Wafer Stepper™, 6
SNYDER, JACK R., A better mousetrap, 75
SUMNEY, LARRY W., New Department of Defense (DoD) initiative in very high speed integrated circuits and its impact on lithography, 1
SYNBORSKI, CHARLES EDWARD, High-resolution flatness-testing interferometer for 6-inch photoplates, 143
TANIMOTO, A., Optical measuring technology of the micropatterns, 124
THOMAS, GEOFFREY R. M., Use of 436 nm optical step-and-repeat imaging for wafer fabrication, 15
TIGREAT, PAUL, Image formation in thick resist, 37
TING, C. H., Mask fabrication with vector scan electron beam system, 90
VAIL, R. C., E-beam lithography field abutment characterization using a surface acoustic wave (SAW) spatial converter, 98
VAN DEVEN, JAMIE, A better mousetrap, 75
WISHNUFF, KENNETH, Electron beam lithography for maskmaking, 84
YOSHIDA, S., Optical measuring technology of the micropatterns, 124
ZELLEY, ALBERT, Dependence of plasma etch rate and uniformity on resist type and processing, 173

SUBJECT INDEX

Abutment characterization using a surface acoustic wave (SAW) spatial converter, e-beam lithography field, 98
Acoustic wave (SAW) spatial converter, e-beam lithography field abutment characterization using a surface, 98
Aligners, new generation of 1:1 optical projection mask, 70
Alignment in proximity and projection printing, diffraction gratings as keys for automatic, 63
Autoalignment in step-and-repeat wafer printing, 54
Automatic alignment in proximity and projection printing, diffraction gratings as keys for, 63

Beam lithography for maskmaking, electron, 84
Beam milling, dry etching with ion, 140
(A) better mousetrap, 75

Characterization using a surface acoustic wave (SAW) spatial converter, e-beam lithography field abutment, 98
Circuits, computerized optical systems for linewidth and film-thickness measurements on microelectronic, 184
Circuits and its impact on lithography, new Department of Defense (DoD) initiative in very high speed integrated, 1
Coherence on projection printing, influence of partial, 22
Coherent illumination improves step-and-repeat printing on wafers, 28
Computerized optical systems for linewidth and film-thickness measurements on microelectronic circuits, 184
Conformable mask—a hybrid near-ultraviolet and deep-ultraviolet patterning technique, portable, 114
Converter, e-beam lithography field abutment characterization using a surface acoustic wave (SAW) spatial, 98
Correlation, wafer flatness: an overview of measurement considerations and equipment, 132

(DoD) initiative in very high speed integrated circuits and its impact on lithography, new Department of Defense, 1
Deep-ultraviolet patterning technique, portable conformable mask—a hybrid near-ultraviolet and, 114
Department of Defense (DoD) initiative in very high speed integrated circuits and its impact on lithography, new, 1
Dependence of plasma etch rate and uniformity on resist type and processing, 173
Design stage of projection lenses, evaluation methods in the, 48
Diffraction gratings as keys for automatic alignment in proximity and projection printing, 63
Dry etching with ion beam milling, 140

E-beam lithography field abutment characterization using a surface acoustic wave (SAW) spatial converter, 98
Electron beam lithography for maskmaking, 84
Electron beam system, mask fabrication with vector scan, 90
Equipment correlation, wafer flatness: an overview of measurement considerations and, 132
Etch rate and uniformity on resist type and processing, dependence of plasma, 173
Etching with ion beam milling, dry, 140
Evaluation methods in the design stage of projection lenses, 48

Fabrication, use of 436 nm optical step-and-repeat imaging for wafer, 15
Fabrication with vector scan electron beam system, mask, 90
Field abutment characterization using a surface acoustic wave (SAW) spatial converter, e-beam lithography, 98
Film-thickness measurements on microelectronic circuits, computerized optical systems for linewidth and, 184
Flatness: an overview of measurement considerations and equipment correlation, wafer, 132
Flatness-testing interferometer for 6-inch photoplates, high-resolution, 143

Formation in thick resist, image, 37
436 nm optical step-and-repeat imaging for wafer fabrication, use of, 15

Generation of 1:1 optical projection mask aligners, new, 70
Gratings as keys for automatic alignment in proximity and projection printing, diffraction, 63

High-resolution flatness-testing interferometer for 6-inch photoplates, 143
How photoresists relate to the world of 1984, 108
Hybrid near-ultraviolet and deep-ultraviolet patterning technique, portable conformable mask—a, 114

Illumination improves step-and-repeat printing on wafers, coherent, 28
Image formation in thick resist, 37
Imaging for wafer fabrication, use of 436 nm optical step-and-repeat, 15
Implantation masks, positive photoresists as ion, 153
Influence of partial coherence on projection printing, 22
Initiative in very high speed integrated circuits and its impact on lithography, new Department of Defense (DoD), 1
Integrated circuits and its impact on lithography, new Department of Defense (DoD) initiative in very high speed, 1
Interferometer for 6-inch photoplates, high-resolution flatness-testing, 143
Ion beam milling, dry etching with, 140
Ion implantation masks, positive photoresists as, 153

Keys for automatic alignment in proximity and projection printing, diffraction gratings as, 63

Lenses, evaluation methods in the design stage of projection, 48
Linewidth and film-thickness measurements on microelectronic circuits, computerized optical systems for, 184
Lithography, new Department of Defense (DoD) initiative in very high speed integrated circuits and its impact on, 1
Lithography field abutment characterization using a surface acoustic wave (SAW) spatial converter, e-beam, 98
Lithography for maskmaking, electron beam, 84

Mann Type 4800DSW™ Wafer Stepper™, testing the, 6
Mask aligners, new generation of 1:1 optical projection, 70
Mask fabrication with vector scan electron beam system, 90
Mask—a hybrid near-ultraviolet and deep-ultraviolet patterning technique, portable conformable, 114
Maskmaking, electron beam lithography for, 84
Masks, positive photoresists as ion implantation, 153
Measurement considerations and equipment correlation, wafer flatness: an overview of, 132
Measuring technology of the micropatterns, optical, 124
Methods in the design stage of projection lenses, evaluation, 48
Microelectronic circuits, computerized optical systems for linewidth and film-thickness measurements on, 184
Micropatterns, optical measuring technology of the, 124
Milling, dry etching with ion beam, 140
Mousetrap, a better, 75

Near-ultraviolet and deep-ultraviolet patterning technique, portable conformable mask—a hybrid, 114
New Department of Defense (DoD) initiative in very high speed integrated circuits and its impact on lithography, 1
New generation of 1:1 optical projection mask aligners, 70
1984, how photoresists relate to the world of, 108

Optical measuring technology of the micropatterns, 124
Optical projection mask aligners, new generation of 1:1, 70
Optical step-and-repeat imaging for wafer fabrication, use of 436 nm, 15
Optical systems for linewidth and film-thickness measurements on microelectronic circuits, computerized, 184

Partial coherence on projection printing, influence of, 22
Patterning technique, portable conformable mask—a hybrid near-ultraviolet and deep-ultraviolet, 114
Photomasks—a low-cost alternative, prototype, 180
Photoplates, high-resolution flatness-testing interferometer for 6-inch, 143
Photoresists as ion implantation masks, positive, 153
Photoresists relate to the world of 1984, how, 108
Plasma etch rate and uniformity on resist type and processing, dependence of, 173
Portable conformable mask—a hybrid near-ultraviolet and deep-ultraviolet patterning technique, 114
Positive photoresists as ion implantation masks, 153
Printing, autoalignment in step-and-repeat wafer, 54
Printing, diffraction gratings as keys for automatic alignment in proximity and projection, 63
Printing, influence of partial coherence on projection, 22
Printing on wafers, coherent illumination improves step-and-repeat, 28
Processing, dependence of plasma etch rate and uniformity on resist type and, 173
Projection lenses, evaluation methods in the design stage of, 48
Projection mask aligners, new generation of 1:1 optical, 70
Projection printing, diffraction gratings as keys for automatic alignment in proximity and, 63
Projection printing, influence of partial coherence on, 22
Prototype photomasks—a low-cost alternative, 180
Proximity and projection printing, diffraction gratings as keys for automatic alignment in, 63

Resist, image formation in thick, 37
Resist type and processing, dependence of plasma etch rate and uniformity on, 173

(SAW) spatial converter, e-beam lithography field abutment characterization using a surface acoustic wave, 98
Scan electron beam system, mask fabrication with vector, 90
Spatial converter, e-beam lithography field abutment characterization using a surface acoustic wave (SAW), 98
Step-and-repeat imaging for wafer fabrication, use of 436 nm optical, 15
Step-and-repeat printing on wafers, coherent illumination improves, 28
Step-and-repeat wafer printing, autoalignment in, 54
Stepper™, testing the Mann Type 4800DSW™ Wafer, 6
Surface acoustic wave (SAW) spatial converter, e-beam lithography field abutment characterization using a, 98

Technology of the micropatterns, optical measuring, 124
Testing the Mann Type 4800DSW™ Wafer Stepper™, 6
Thick resist, image formation in, 37
Type and processing, dependence of plasma etch rate and uniformity on resist, 173

Ultraviolet and deep-ultraviolet patterning technique, portable conformable mask—a hybrid near-, 114
Uniformity on resist type and processing, dependence of plasma etch rate and, 173
Use of 436 nm optical step-and-repeat imaging for wafer fabrication, 15

Vector scan electron beam system, mask fabrication with, 90
Very high speed integrated circuits and its impact on lithography, new Department of Defense (DoD) initiative in, 1

Wafer fabrication, use of 436 nm optical step-and-repeat imaging for, 15
Wafer flatness: an overview of measurement considerations and equipment correlation, 132
Wafer printing, autoalignment in step-and-repeat, 54
Wafer Stepper™, testing the Mann Type 4800DSW™, 6
Wafers, coherent illumination improves step-and-repeat printing on, 28
Wave (SAW) spatial converter, e-beam lithography field abutment characterization using a surface acoustic, 98